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## ABSTRACT

The purpose of this study was to examine the two aspects of the SOC constructs and their effect as interactive factors on the relationship between the pile up of life events and psychological adjustment in a sample of educated women. The primarily theoretical framework for this investigation is Hill's ABCX Model of Stress as revised by the Double ABCX Model. A sample of 3,000 college-educated women, members of the American Association of University Women (AAUW), were randomly selected for participation in this survey with 1,300 responses (a 43% response rate). An ex post facto research design with hypotheses and testing alternatives was used. It was concluded that there is a positive correlation between life event pile-up and psychological distress. A major implication of the present study is that theories and empirical efforts which purport to explain stressor-adjustment relationships simply by including a mediating variable between the two terms and considering main effects oversimplify the situation. A more abstract implication is the need for major revisions in the research of life event stressors, women, and psychological adjustment. Numerous tables and figures are included. (JBJ)

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Stress in Educated Women as It Relates  
to Psychological Adjustment

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## Stress in Educated Women as It Relates to Psychological Adjustment

### Objective

The purpose of this study was to examine the two aspects of the SOC construct and their effect as interactive factors on the relationship between the pile up of life events and psychological adjustment in a sample of educated women. The primary theoretical framework for this investigation is Hill's (1949, 1958) ABCX Model of Stress as revised by the Double ABCX Model (McCubbin & Patterson, 1983a; 1983b).

### Theoretical Model

Current stress-related "... research lacks a guiding theoretical orientation" (Brown & Heath, 1984, pp. 546-547). As a result, no one model of stress has yet emerged which is endorsed by all stress researchers (Laux & Vossel, 1982). Thus, Holroyd and Lazarus (1982) conclude that progress in stress-related research will demand major revision in both the theory and research strategies that now dominate the subject area. Makosky (1980) adds that one necessary revision is the inclusion of women in stress-based research.

Makosky states that there is considerable evidence linking life events to both physical and mental health, but the literature does not contain the necessary data about how such relationships relate to females. She urges that researchers use different life event items that relate to women. If these steps were taken, then

we would be able to make a much stronger case for the ways in which events and conditions in the lives of individual women and groups of women are related to their mental health (p. 124). Makosky (1980) believes that benefits from such findings would include more informed social policies and programs.

For a model to be useful it ought to accurately, adequately, and satisfactorily describe and explain those relationships of interest. The ABCX Model incorporates:

1. life event stressors, e.g., family problems, new employer, illness, etc.
2. an individual's assets, i.e., tangible and intangible resources. An example of the latter is personality.
3. perception of stressors (#1) relative to resources (#2). This yields a definition or meaning of the stressor event.
4. an outcome criterion such as crisis or adjustment (Hill, 1949, 1958; Mederer & Hill, 1983).

The ABCX Model conceptualizes that the stressor event (A) interacting with the family's resources to face a crisis (B), interacting with the family's definition or meaning of the stressor event (C), result in the crisis itself (X). Clearly, the interactive relationship among these components is a key feature of the model. In this investigation, the ABCX Model is applied to educated women, rather than applied to the family, in order to determine a woman's reaction to stressful life events.

Another feature of the model is the allowance for a personality construct, embedded in the B factor, which distinguishes individual responses, i.e., it permits individual differences to be considered. In a revision of the ABCX Model (Double ABCX Model, McCubbin & Patterson, 1986) the personality measure used is Antonovsky's (1979, 1987) sense of coherence (SOC). The pile-up concept also calls for the inclusion of continuous life events rather than solely discrete ones as responsible for the level of demands (Lavee et al., 1987).

The personality construct employed and empirically tested in the current study is sense of coherence (SOC) (Antonovsky, 1979; 1987). It has been hypothesized that the concept of sense of coherence reflects "... the extent to which one sees one's world as comprehensible, manageable, and meaningful" (1979, p. 79). Antonovsky and Sourani (1988) note that actually two different questions are raised; one deals with pathology and the other with salutogenesis, i.e., the origins of health.

The two components of SOC, Confidence and Acceptance, logically line up with two different parts of the ABCX Model. The Confidence component of SOC may be thought of as a B factor, i.e., a crisis-meeting resource. The Acceptance component of SOC matches up with the definition (C) ascribed to A, the stressor. In other words, the Acceptance component of SOC can be equated with the C factor of the ABCX Model. Thus, in asking how the Confidence and Acceptance elements of SOC respectively account for psychological adjustment after a pile-up of life events, the same question may also be stated in the following fashion: does the B factor or the C factor better predict psychological adjustment for educated women following a pile-up of life event stressors?

Sense of coherence, in this study, incorporates the woman's perception of her own level of coherence.

#### Statement of the Purpose

There has been very little empirical study of educated women in terms of the interactive effect of personality and an accumulation of stressors on psychological adjustment. The hypotheses derived from the ABCX Model as formulated in this research may extend our knowledge of the psychological adjustment of educated women.

#### Description of the Sample

A sample of 3,000 college-educated women who were members of the American Association of University Women (AAUW) were randomly selected for participation in this survey. Respondents represented a diverse geographical dispersion. This sample was characterized by a range of ages (23-83+ years), education, occupations (36% of the sample were employed on a full-time basis), and economic levels (annual incomes ranged from less than \$5,000 to \$125,000+). Varying life styles were also represented, including: currently married (67%), never married, divorced, and remarried with or without offspring. Approximately 1,300 (43.3%) responses were received from this sample.

#### Design

An ex post facto research design with hypotheses and testing alternatives was used (Newman & Newman, 1994).

### Procedures

The three primary psychosocial measurements used in this investigation were the Family Inventory of Life Events (FILE-Form C) (McCubbin, Wilson, & Patterson, 1981), The Family Crisis Oriented Personal Evaluation Scales (F-COPES adapted) (McCubbin, Olson, & Larsen, 1981), and the Symptom Checklist-90-Revised (SCL-90-R) (Derogatis, 1975).

Cleminshaw, Newman, Zarski, Heckroth, and Cowan (1988) examined the SCL-90-R in terms of its validity and generalizability relative to the same population of educated adult females used in this investigation. The authors conducted a factor analysis which demonstrated "a three factor solution." These three factors were named:

1. "Generalized Psychological Severity Factor." This general factor is very similar to SCL-90-R's global severity index (GSI). Almost all of the SCL-90-R items loaded on this factor (Cleminshaw et al., 1988). Out of the 90 items of the SCL-90-R, 61 of them loaded on this factor. The total Eigenvalue for these items/this factor is 21.98 (see Appendix B for the factor structure of the 90 items of the SCL-90-R.)

2. "Phobic/Anxiety Factor." Eleven items of the SCL-90-R loaded on this factor. The total Eigenvalue for these items/this factor is 3.90.

3. "Psychotic Factor." Nine items from the SCL-90-R loaded on this factor. The total Eigenvalue for these items/this factor is 3.175. These three factors were also cross-validated. Cleminshaw et al. (1988) offer, as one potential explanation for finding three factors, instead of nine, the sample's restricted range. The restricted range may be directly attributable to the high level of education that the subjects possess. The three factors identified by Cleminshaw et al. are used in this investigation as measures of mental health because the present sample is the same as that used in their work. Cleminshaw et al. conclude that the Checklist is an acceptable instrument for an educated, female, adult population if the non-psychotic female norms are utilized.

### Data Collection

The data for the instruments were gathered via surveys. Instruments were accompanied by a letter of explanation in which participation was solicited. The survey instrument included a 115-item demographic questionnaire and instruments previously described. Such packets were sent out in early December 1986; responses continued to be received during early 1987.

### Inferential Statistics

The General Linear Model (GLM) was utilized in the data analysis. The GLM permits examining the interaction between the following variables: (a) categorical and categorical, (b) categorical and continuous, and (c) continuous and continuous (Newman, 1976). The GLM was used in testing alternative hypotheses (covariance).

### F-Tests

To test the statistical significance of the postulated relationships, the F-test was used. The F-test is extremely robust. Assumptions of random selection of subjects and the normal distribution of variables may be violated without invalidating the procedure (Newman & Newman, 1994).

### Alpha Level

The .05 alpha level will be set because, in the opinion of the author, the consequences of a Type I error (rejecting a true null hypothesis) were not serious enough to justify setting a more stringent confidence level.

### Power

Power is the ability to detect a difference when a difference exists (Newman & Newman, 1994). Four parameters must be known in order to estimate power. These are: (a) alpha level, set at .05 in this investigation; (b) effect size = ( $f^2$ ); (c) sample size = approximately 1,300 in this investigation; and (4) the total of linearly independent vectors in the equations (Newman & Benz, 1980). A power analysis (Cohen, 1977; Newman & Benz, 1983) was calculated by using the initial three-way interaction equation, i.e., life events, Confidence, and Acceptance predicting generalized psychological severity.

$$N = 674$$

$$a = .05$$

$$f^2 \text{ (effect size)} = .02 \text{ (small effect)}$$

$$M_1 \text{ (the number of linearly independent vectors in the full model)} = 7$$

$$M_2 \text{ (the number of linearly independent vectors in the restricted model)} = 6$$

$$V = df^2 (N - M_1)$$

$$u = df_1 (M_1 - M_2)$$

$$L = f^2 V$$

$$L = .02 (667) = 13.34$$

$$\text{power} = .95$$

### Cross Validation

This analysis was done by randomly splitting the sample and then cross-validating, on the second sample, to test the stability of the relationships.

### Analysis of Covariance

The GLM allows analysis of covariance (ANCOVA) to be readily tested (Newman, 1976). By covarying the predictor variable(s), the amount of unique variance of the criterion variable may be ascertained.

### Post Hoc Analyses

Post hoc analyses were conducted in order to determine where significant differences occurred after a significant F ratio was found relative to the generalized psychological severity factor.

### Instruments

The three instruments, used in this study and under investigation here, e.g., life events Confidence, Acceptance, and psychological adjustment are Family Inventory of Life Events (FILE), Family Oriented Personal Evaluation Scales (F-Copes) and Symptom Checklist-90-Revised (SCL-90-R).

Pile-Up is measured by the aggregate of Family Inventory of Life Events (FILE) items in which a subject responded that stressors took place (a) in the past 12 months, (b) prior to the past 12 months, or (c) both. There are 71 items which will be equated with stressors. These 71 stressors falls into nine different domains. These domains include the following:

- I. Intra-Family Strains
- II. Marital Strains
- III. Pregnancy and Childbearing Strains
- IV. Finance and Business Strains
- V. Work-Family Transitions and Strains
- VI. Illness and Family "Care" Strains
- VII. Losses
- VIII. Transitions "In and Out"
- IX. Family Legal Violations

Note that there is a total score on the Inventory also. This life event list includes a wider net of possible experiences for female subjects than many life event lists utilized in past research. The total score from FILE is operationally defined as pile-up.

Sense of coherence. Personality is that which is unique to the person, rather than the environment. SOC is measured by seven items from the Family Crisis Oriented Personal Scales (F-COPES). F-COPES seeks to specify the strategies which individuals and families use when stressed. F-COPES has been modified, in this investigation, to reflect an individual's level of sense of coherence. Seven items comprise two subscales of SOC, Confidence and Acceptance. These subscales and their respective items are as follows:

#### Confidence Subscale

1. Knowing I have the power to solve major problems.
2. Knowing that I have the strength to solve my problems.
3. Believing I can handle my own problems.
4. Showing that I am strong.



### Acceptance Subscale

1. Accepting stressful events as a fact of life.
2. Defining the family problem in a more positive way so that I do not become too discouraged.
3. Accepting that difficulties occur unexpectedly.

There exist two perspectives within the ABCX Model—the B factor and the C factor. They posit two differing conceptions of how stressor pile-up is handled. The B factor, equated in this investigation with the SOC subscale titled Confidence, conceives of a competent and efficacious psychological response set. The four-item Confidence subscale of SOC shown above is characterized by words such as "power," "strength," "can handle," and "strong." The C factor, equated in this study with the SOC subscale termed Acceptance, offers a vastly differing orientation. Here a more passive approach is adopted. "Accepting" and "defining" events more positively in order to avoid discouragement characterize this far more fatalistic perspective.

Psychological adjustment is measured via the Symptom Checklist-90-R (Derogatis, 1975). The Checklist "... is a multi-dimensional self-report symptom inventory designed to measure symptomatic psychological distress" (Derogatis, 1982, p. 277). There are nine "symptom dimensions" (Derogatis, 1977, p. 2) as well as three overall distress indices. In this investigation, psychological adjustment is defined as a function of an individual's score on three factors which were derived by a factor analysis of the SCL-90-R by Cleminshaw, Newman, Zarski, Heckroth, and Cowan (1988). A three-factor solution was evidenced via utilizing both a Scree test and a factor analysis. The factor analysis employed an Eigenvalue of 1 as a cutoff. For their sample of educated women, Cleminshaw et al. (1988) discovered that almost all of the items were loaded on Factor 1 which was termed "a Generalized Psychological Severity Factor."

## Results

### Pearson Correlation Coefficients

All three measures of psychological distress significantly correlated with one another in a positive direction. These relationships are depicted in Table 1.

Table 1

### Correlations Among Dependent Variables

| Relationship Between<br>Dependent Variables                    | Correlation | Probability |
|--|-------------|-------------|
| Generalized psychological severity and<br>phobic/anxiety       | .70         | .0001       |
| Generalized psychological severity and<br>the psychotic factor | .75         | .0001       |
| Phobic/anxiety and the psychotic factor                        | .63         | .0001       |



### Data Analyses Concerning Confidence and Acceptance

- GH1: There is a statistically significant relationship among the three-way interaction of the A factor (life event pile-up), the B factor (SOC Confidence subscale), and the C factor (SOC Acceptance subscale) in predicting psychological adjustment.
- H1: There is a significant three-way interaction among stressful life event pile-up, Confidence, and Acceptance in predicting generalized psychological severity. This hypothesis was found to be significant. The results of this model are presented in Table 2.

Table 2

### Three-way Interaction: Generalized Psychological Severity

| Criterion Variable                 | Hyp. Number    | Predictor Variable                                       | R <sup>2</sup> F | R <sup>2</sup> r | f <sup>2</sup> Ratio | df    | F Ratio | Probability | Signif. |
|------------------------------------|----------------|--|------------------|------------------|----------------------|-------|---------|-------------|---------|
| Generalized Psychological Severity | H <sub>1</sub> | 3-way interaction: life events * Confidence * Acceptance | .1270            | .1178            | .01                  | 1/667 | 7.0136  | .0083       | S       |

In explaining the relationship among the three independent variables (life events, Confidence, and Acceptance) the initial general hypothesis purports to examine the general case of the ABCX and Double ABCX Model. The three-way interaction accounted for a significant amount of variance in predicting the dependent variable, i.e., generalized psychological severity. This evidence demonstrates that there is interaction among the three independent variables utilized in this study of educated women, when predicting generalized psychological severity. The following caution, however, is in order: the effect size of the initial specific hypothesis is not meaningful (Cohen, 1977).

Note that when categorical and continuous variables are used and only the categorical variables are plotted, the graphs are only estimates of significant interaction (which are continuous). Thus, the series of graphs are estimates of Confidence and Acceptance. The three-way interaction accounted for a very small amount of variance in predicting generalized psychological severity.

In order to see where significant differences occurred for low life events, post hoc analyses were conducted comparing the results. Tables 3A-3C contain the post hoc comparisons.

Table 3A

Post Hoc Comparisons for Low Life Events: Generalized Psychological Severity

| Comparison   | Calculated t | Significance |
|--|--------------|--------------|
| LE <sub>Low</sub> Con <sub>Low</sub> Acc <sub>Low</sub> LE <sub>Low</sub> Con <sub>Low</sub> Acc <sub>Med</sub>    | 8.86         | S            |
| LE <sub>Low</sub> Con <sub>Low</sub> Acc <sub>Low</sub> LE <sub>Low</sub> Con <sub>Low</sub> Acc <sub>High</sub>   | 10.40        | S            |
| LE <sub>Low</sub> Con <sub>Low</sub> Acc <sub>Med</sub> LE <sub>Low</sub> Con <sub>Low</sub> Acc <sub>High</sub>   | 3.01         | S            |
| LE <sub>Low</sub> Con <sub>Med</sub> Acc <sub>Low</sub> LE <sub>Low</sub> Con <sub>Med</sub> Acc <sub>Med</sub>    | 7.55         | S            |
| LE <sub>Low</sub> Con <sub>Med</sub> Acc <sub>Low</sub> LE <sub>Low</sub> Con <sub>Med</sub> Acc <sub>High</sub>   | -1.75        | NS           |
| LE <sub>Low</sub> Con <sub>Med</sub> Acc <sub>Med</sub> LE <sub>Low</sub> Con <sub>Med</sub> Acc <sub>High</sub>   | 4.97         | S            |
| LE <sub>Low</sub> Con <sub>High</sub> Acc <sub>Low</sub> LE <sub>Low</sub> Con <sub>High</sub> Acc <sub>Med</sub>  | 2.50         | S            |
| LE <sub>Low</sub> Con <sub>High</sub> Acc <sub>Low</sub> LE <sub>Low</sub> Con <sub>High</sub> Acc <sub>High</sub> | 5.51         | S            |
| LE <sub>Low</sub> Con <sub>High</sub> Acc <sub>Med</sub> LE <sub>Low</sub> Con <sub>High</sub> Acc <sub>High</sub> | 3.6          | S            |

Table 3B

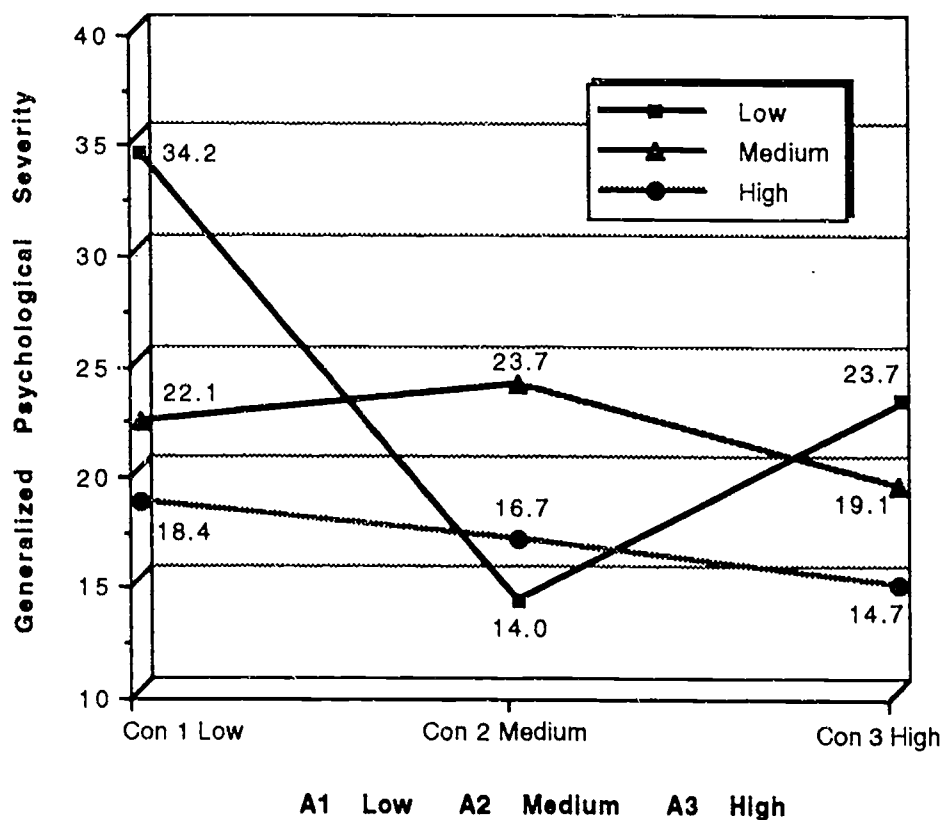
Post Hoc Comparisons for Medium Life Events: Generalized Psychological Severity

| Comparison   | Calculated t | Significance |
|--|--------------|--------------|
| LE <sub>MED</sub> Con <sub>Low</sub> Acc <sub>Low</sub> LE <sub>MED</sub> Con <sub>Low</sub> Acc <sub>Med</sub>    | 9.74         | S            |
| LE <sub>MED</sub> Con <sub>Low</sub> Acc <sub>Low</sub> LE <sub>MED</sub> Con <sub>Low</sub> Acc <sub>High</sub>   | 9.2          | S            |
| LE <sub>MED</sub> Con <sub>Low</sub> Acc <sub>Med</sub> LE <sub>MED</sub> Con <sub>Low</sub> Acc <sub>High</sub>   | -1.71        | NS           |
| LE <sub>MED</sub> Con <sub>Med</sub> Acc <sub>Low</sub> LE <sub>MED</sub> Con <sub>Med</sub> Acc <sub>Med</sub>    | 2.57         | S            |
| LE <sub>MED</sub> Con <sub>Med</sub> Acc <sub>Low</sub> LE <sub>MED</sub> Con <sub>Med</sub> Acc <sub>High</sub>   | 3.61         | S            |
| LE <sub>MED</sub> Con <sub>Med</sub> Acc <sub>Med</sub> LE <sub>MED</sub> Con <sub>Med</sub> Acc <sub>High</sub>   | 1.91         | NS           |
| LE <sub>MED</sub> Con <sub>High</sub> Acc <sub>Low</sub> LE <sub>MED</sub> Con <sub>High</sub> Acc <sub>Med</sub>  | 6.30         | S            |
| LE <sub>MED</sub> Con <sub>High</sub> Acc <sub>Low</sub> LE <sub>MED</sub> Con <sub>High</sub> Acc <sub>High</sub> | 11.49        | S            |
| LE <sub>MED</sub> Con <sub>High</sub> Acc <sub>Med</sub> LE <sub>MED</sub> Con <sub>High</sub> Acc <sub>High</sub> | 4.94         | S            |

Table 3C

Post Hoc Comparisons for Low Life Events: Generalized Psychological Severity

| Comparison   | Calculated t | Significance |
|--|--------------|--------------|
| LE <sub>High</sub> Con <sub>Low</sub> Acc <sub>Low</sub> LE <sub>High</sub> Con <sub>Low</sub> Acc <sub>Med</sub>    | 8.79         | S            |
| LE <sub>High</sub> Con <sub>Low</sub> Acc <sub>Low</sub> LE <sub>High</sub> Con <sub>Low</sub> Acc <sub>High</sub>   | -.523        | NS           |
| LE <sub>High</sub> Con <sub>Low</sub> Acc <sub>Med</sub> LE <sub>High</sub> Con <sub>Low</sub> Acc <sub>High</sub>   | 6.36         | S            |
| LE <sub>High</sub> Con <sub>Med</sub> Acc <sub>Low</sub> LE <sub>High</sub> Con <sub>Med</sub> Acc <sub>Med</sub>    | -5.88        | S            |
| LE <sub>High</sub> Con <sub>Med</sub> Acc <sub>Low</sub> LE <sub>High</sub> Con <sub>Med</sub> Acc <sub>High</sub>   | 1.20         | NS           |
| LE <sub>High</sub> Con <sub>Med</sub> Acc <sub>Med</sub> LE <sub>High</sub> Con <sub>Med</sub> Acc <sub>High</sub>   | 11.63        | S            |
| LE <sub>High</sub> Con <sub>High</sub> Acc <sub>Low</sub> LE <sub>High</sub> Con <sub>High</sub> Acc <sub>Med</sub>  | 4.77         | S            |
| LE <sub>High</sub> Con <sub>High</sub> Acc <sub>Low</sub> LE <sub>High</sub> Con <sub>High</sub> Acc <sub>High</sub> | 8.59         | S            |
| LE <sub>High</sub> Con <sub>High</sub> Acc <sub>Med</sub> LE <sub>High</sub> Con <sub>High</sub> Acc <sub>High</sub> | 11.23        | S            |

Figure 2. Three-way interaction under low life event conditions

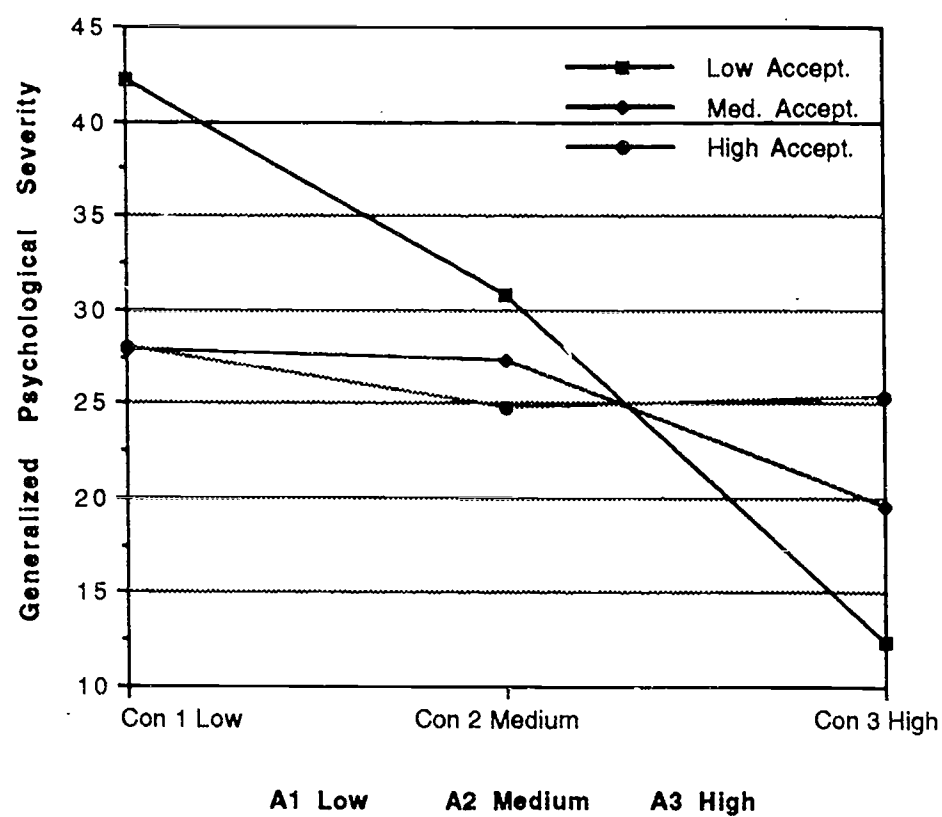


Figure 3. Three-way interaction under medium life event conditions

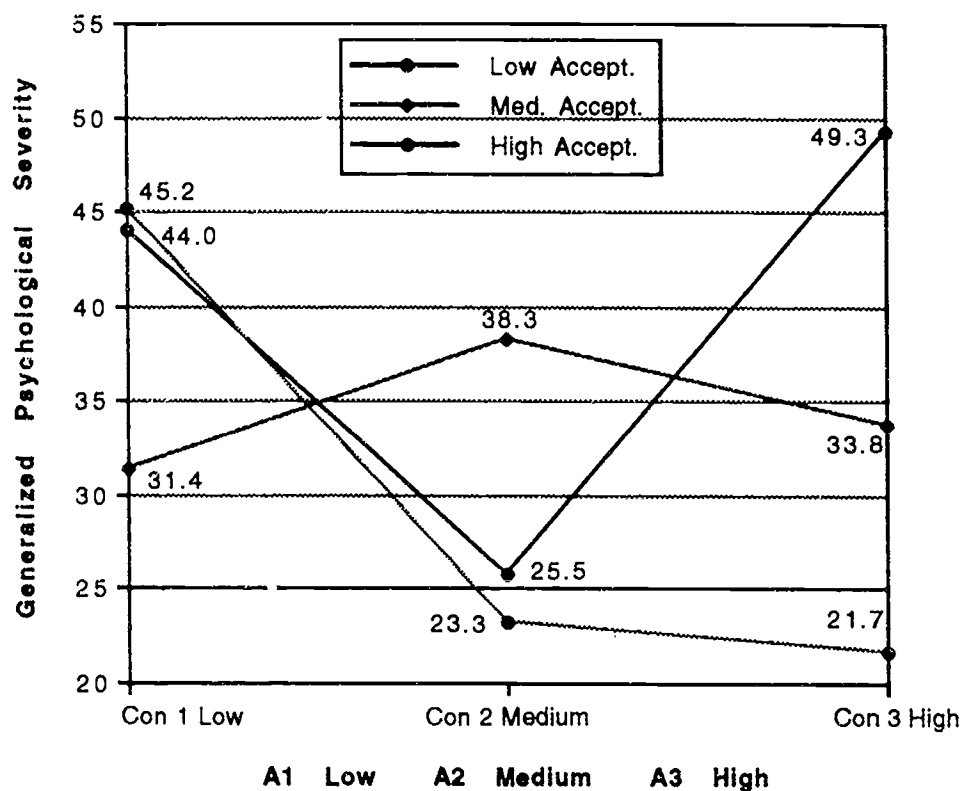


Figure 4. Three-way interaction under high life event conditions

Table 4

Curvilinear Relationship Between Life Events and Generalized Psychological Severity, Life Events and Phobic/Anxiety, and Life Events and the Psychotic Factor

| Hyp. Number           | Dependent Variable                 | Predictor Variable  | R <sup>2</sup> F | R <sup>2</sup> r | f <sup>2</sup> | d <sub>F</sub> | F Ratio | Prob. | Sig. |
|-----------------------|------------------------------------|---|------------------|------------------|----------------|----------------|---------|-------|------|
| H2 <sub>curve A</sub> | Generalized psychological severity | Curvilinear relationship between life events and generalized psychological severity | .0650            | .0607            | .00459         | 1/712          | 3.2424  | .0722 | NS   |
| H2 <sub>curve B</sub> | Phobic/anxiety factor              | Curvilinear relationship between life events and phobic/anxiety factor              | .019             | .0136            | .0056          | 1/836          | 4.7127  | .0302 | S    |
| H2 <sub>curve C</sub> | Psychotic factor                   | Curvilinear relationship between life events and the psychotic factor               | .0328            | .0117            | .0218          | 1/838          | 18.2667 | .0001 | S    |

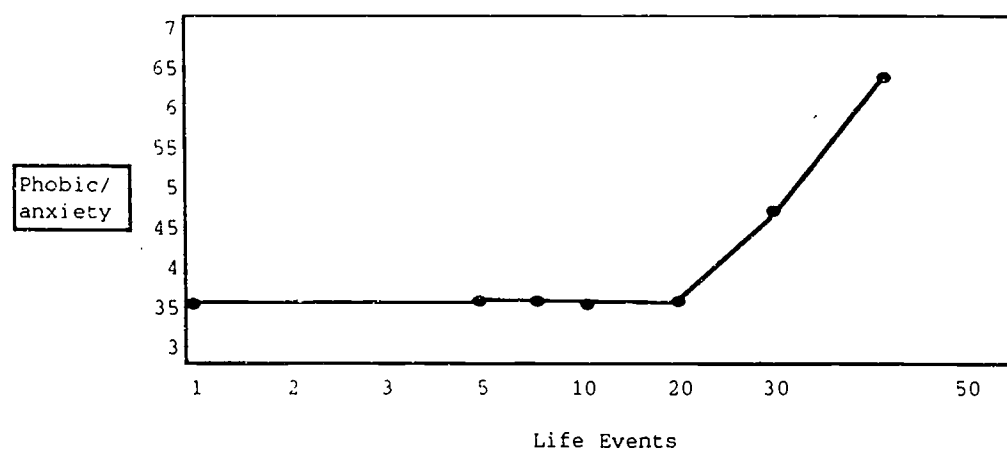


Figure 5. Curvilinear relationship between life events and phobic/anxiety

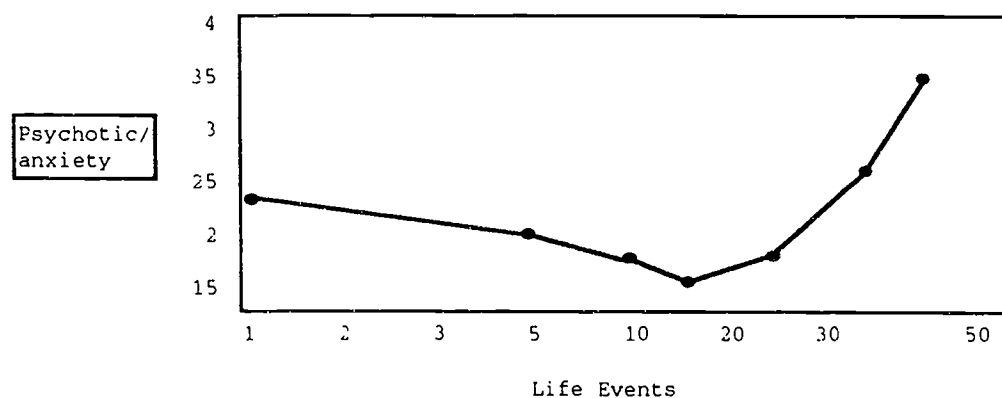


Figure 6. Curvilinear relationship between life events and the psychotic factor

In summary, there is a significant relationship between the pile-up of stressful life events and (a) generalized psychological severity, (b) phobic/anxiety, and (c) the psychotic factor. As life events increase so did the psychological distress for the subjects.

Curvilinear relationships were statistically significant only for the latter two measures of psychological distress. However, there was only practical significance found for the curvilinear relationship between life events and the psychotic factor.

Table 10

## Curvilinear Relationship Between Confidence and Generalized Psychological Severity

| Hyp. Number     | Criterion Variable                 | Predictor Variable | R <sup>2</sup> F | R <sup>2</sup> r | f <sup>2</sup> | d <sub>F</sub> | F Ratio | Prob. | Sig. |
|-----------------|------------------------------------|--------------------|------------------|------------------|----------------|----------------|---------|-------|------|
| Hcurvilinear 3a | Generalized psychological severity | Confidence         | .0595            | .0525            | .007           | 1/689          | 5.1607  | .0234 | S    |

As one can see from Table 10, a curvilinear relationship between Confidence and generalized psychological severity exists but does not account for any meaningful portion of the variance ( $f^2 = .007$ )

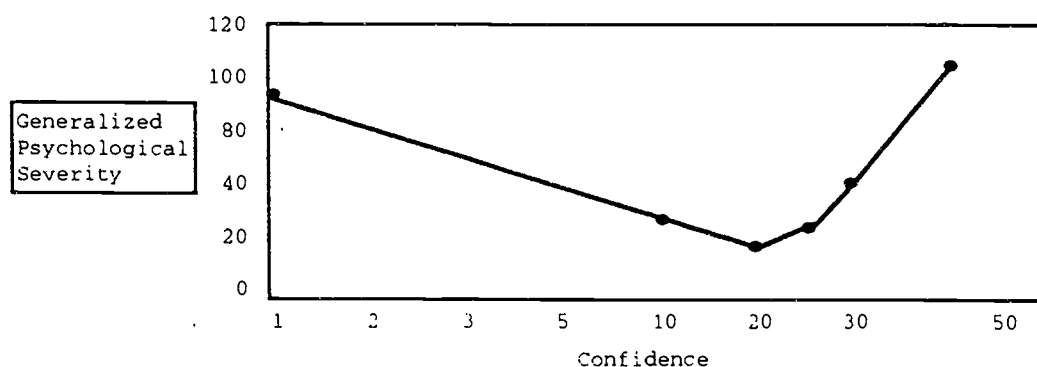


Figure 7. Curvilinear relationship between Confidence and Generalized Psychological Severity.

As depicted in Figure 7, the curvilinear relationship between Confidence and generalized psychological severity indicates that generalized psychological severity declines until a score of 19.8 is reached. After that point, generalized psychological severity increases despite increased Confidence scores.

Table 11

## Correlation Between Acceptance and Generalized Psychological Severity

|                                 | H <sub>4</sub> Corr a<br>Generalized Psychological Severity |
|---------------------------------|---|
| Pearson Correlation Coefficient | -.12689   |
| Probability                     | .0008   |
| Number of observations          | 698   |



Table 12

Curvilinear Relationship Between Acceptance and Generalized Psychological Severity

| Hyp. Number     | Criterion Variable                 | Predictor Variable | R <sup>2</sup> F | R <sup>2</sup> r | f <sup>2</sup> | d <sub>F</sub> | F Ratio | Prob. | Sig. |
|-----------------|------------------------------------|--------------------|------------------|------------------|----------------|----------------|---------|-------|------|
| Hcurvilinear 4a | Generalized psychological severity | Acceptance         | .0218            | .0161            | .0058          | 1/695          | 4.0257  | .0452 | S    |

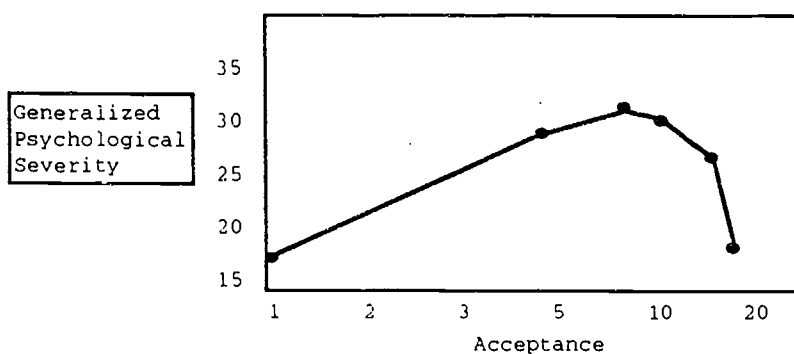


Figure 8. Curvilinear relationship between Acceptance and Generalized Psychological Severity

Cross Validation

The original group of survey respondents were divided into two groups, i.e., two halves. A new variable was created from prediction equations of the three psychological measures relative to the first half of the sample. This new variable, termed newvar, was then applied to the second half of the survey respondents for each of the three dependent variables. A comparison of the R<sup>2</sup>F from the two halves of the sample for each of the respective equations follows in Table 13.

Table 13

Cross-Validation: Comparison of the Two Halves of Survey Sample

| Hypothesis Number                | R <sup>2</sup> F for First Half of Sample | Hypothesis Number                | Cross-Validated R <sup>2</sup> F on Second Half of Sample | Shrinkage |
|----------------------------------|---|----------------------------------|---|-----------|
| H <sub>cross validation 1a</sub> | .1508                                     | H <sub>cross validation 1b</sub> | .0687   | .0821     |
| H <sub>cross validation 2a</sub> | .0636                                     | H <sub>cross validation 2b</sub> | .0068   | .0568     |
| H <sub>cross validation 3a</sub> | .1522                                     | H <sub>cross validation 3b</sub> | .0027   | .1495     |

The very wide fluctuations between the R<sup>2</sup>F numbers in each of the three comparisons above indicate that the stability of the foregoing results, i.e., Hypotheses 1-7, is open to question. Since greater than 10% shrinkage rates were found, one must assume that these weights (functional relationships) are not stable. Shrinkage was so great that one must conclude that foregoing relationships found must be considered sample specific.

Implication

A major implication of the present study is that theories and empirical efforts which purport to explain stressor-adjustment relationships simply by including a mediating variable between the two terms and considering main effects oversimplify the situation. Related to this deficiency are theories which attempt to explain human behavior yet only deal with one psychological variable and view that variable as either present or not present or, similarly, high or low.

On a more abstract level, an overarching implication drawn from this study which transcends the trend previously cited is the need for major revisions in the research of life event stressors, women and psychological adjustment. These revisions are described below. Makosky (1980) has criticized the literature for the under-representation of females' experiences of stressful life events. A revision which is required includes first, the inclusion of women in the studies of life event stressors and psychological adjustment. It is not acceptable to take findings from studies based on males and generalize the results to females.

When women and life event stressors are investigated, the investigations more frequently focus on lower socioeconomic women, e.g., Belle (1987) and Fitzgerald and Nutt (1986), than it does on highly educated women per se. This study investigated women who had at least an undergraduate degree and thereby extended the research on life events, personality variables, and psychological variables to include educated women.

The second revision would incorporate a variety of subgroups of women in research rather than more circumscribed groups. Baruch et al. (1987) caution researchers that both the usefulness and accuracy of stress research is limited when women who are included research are treated "as a homogeneous group" (p. 130). Future studies of educated women may now study this population through more heterogeneous methods. An example of this would include experimental research designs to further study how Confidence and Acceptance are used under varying conditions of stress.

### Summary

In summary, the interaction of life events, Confidence, and Acceptance accounts for a significant amount of variance in predicting generalized psychological severity. However, only a minimal effect size was found. It appears that when considering the pairing of the two psychological variables, a complementarity of Confidence and Acceptance is found in most cases in their joint relationship to generalized psychological severity. Because there was a statistically significant relationship established in the three-way interaction, it is not technically correct to interpret the two-way interactions from other hypotheses. Therefore, simple effects were interpreted. Correlations are run, instead of interactions, for those hypotheses which had posited two-way interactions.

In examining the relationship between the pile-up of stressful life events and psychological adjustment, correlations were run among life events and generalized psychological severity, phobic/anxiety, and the psychotic factor, respectively. These correlations follow:

Pearson Correlation Coefficient between life events and generalized psychological severity = .24643  
 Probability = .0001  
 Number of observations = 715

Pearson Correlation Coefficient between life events and phobic anxiety = .11669  
 Probability = .0007  
 Number of observations = 839

Pearson Correlation Coefficients between life events and the psychotic factor = .10838  
 Probability = .0016  
 Number of observations = 841

All three correlations are statistically significant. A positive correlation exists for all three relationships with the magnitude of the correlation, shown in their rank order, as depicted above. Thus, it is concluded there is indeed a positive correlation between life event pile-up and psychological distress.

Curvilinear relationships between life events and (a) generalized psychological severity, (b) phobic/anxiety, and (c) the psychotic factor were also examined. The results of this inquiry demonstrate that significance was found for the latter two variables but not the former variable. The second degree curvilinear relationship of life events is not significantly related to generalized psychological severity.